

Sub
F1 107. (Amended) The absorbent article of Claim 45 comprising a
diaper.

02 108. (Amended) The absorbent article of Claim 45 comprising an
incontinence pad.

REMARKS

Applicants' undersigned attorney would like to thank the Examiner for her comments. In Paragraph 1 of the Office Action, the Examiner indicated that German Publication 1,907,914 has not been considered because a concise English language explanation of the reference was not provided. To the contrary, a concise English language explanation of the reference appears on page 8, lines 30-34 of the specification.

DE-AS-1907914, for example, describes the manufacture of fine-particle amino resin solid materials based on urea-formaldehyde condensates by acid-catalyzed polycondensation in aqueous medium.

Accordingly, Applicants request that the reference be entered and considered, at least to the extent that it is described in the specification.

In Paragraph 2 of the Office Action, the Examiner objected to Claim 50 based on the previous misspelling of “polymethylene urea.” The spelling error has been corrected.

In Paragraphs 3-5 of the Office Action, the Examiner rejected Claims 107 and 108 under 35 U.S.C. §112, second paragraph, as depending from a canceled claim. These claims have been amended to depend from Claim 45, which is pending. Applicants respectfully request withdrawal of this rejection.

In Paragraphs 6-14 of the Office Action, the Examiner rejected Claims 45-49, 57-59, 62, 68-69, 71, 73-75, 82-86, 94-96, 102-105 and 107-111 under 35 U.S.C. §102(b) as anticipated by European Publication EP 0,339,461 by Kellenberger. The Examiner premises the rejection on the following conclusions:

Kellenberger teaches the use of the core comprising superabsorbent particles (20) that are disposed in a fibrous matrix, but are free floating within (are not bound to the fibrous matrix) (see Figures 2-4). It is the Examiner’s position that if the superabsorbent particles are not bound to the fibers, then they are flowable particles, and are capable of remaining able to flow after contact with liquid (Office Action, p. 3, ¶8).

The anticipation rejection is respectfully traversed. The underlying independent Claims 45, 62 and 102 (from which the remaining claims depend) require the absorbent body to include a flowable absorbent material that remains able to flow after contact with a liquid. Kellenberger teaches away from this limitation.

The Kellenberger reference is entitled "Absorbent Products Containing Hydrogels With Ability To Swell Against Pressure." The hydrogels are contained within a porous matrix of fibers. According to the Abstract of Kellenberger:

. . . when in the form of discrete particles, at least about 50% of said superabsorbent material has a size greater than the median pore size of the matrix when wet.

Kellenberger further defines "superabsorbents" as limited to materials which "gel" when wet:

The hydrogels. . . are not superabsorbents unless they can generate a gel when simply exposed to the fluid (p. 2, lines 15-18).

That the disclosed superabsorbent must form a gel, and must swell to a size exceeding the pore size of the matrix containing it, would essentially preclude the disclosed superabsorbent from flowing when wet. Indeed, Kellenberger goes a step further by stating that the disclosed superabsorbent will continue to absorb liquid and continue to swell, even while under pressure:

It is an object of the present invention to provide an absorbent composite for a disposable sanitary article which will not only retain fluid under an applied restraining force, but will also absorb fluid under actual pressures exerted by the body during use (p. 3, lines 12-19).

Thus, instead of flowing freely when exposed to a liquid, the superabsorbent materials in Kellenberger gel, swell to a size greater than the median pore size of the matrix containing them, and become lodged in place. When a force

is applied to the absorbent article, the swollen superabsorbent particles simply cannot flow from one location to another. Instead, they remain essentially lodged in place, and perform work against the applied force:

The inventor has found that an absorbent composite 16 comprising a porous matrix of fibers 18 and superabsorbent particles 20 interspersed among the fibers 18 (Figs. 1, 2 and 4) exhibits an improved performance when the particles 20 can swell against an applied restraining force of from about 10,000 to about 50,000 dynes/sq. cm. while performing an amount of work greater than about 300,000 ergs/gm of particles. Preferably, greater than about 500,000 ergs/gm of particles (p. 5, lines 23-28).

The Applicants' invention, by contrast, requires flowable absorbent particles which avoid load or pressure when wet. To avoid the load or pressure, the absorbent particles flow from one place to another within the absorbent article when a load or pressure is applied (p. 5, lines 9-19). When the load or pressure is released, the displaced absorbent particles may flow back toward their initial positions. The flowable absorbent particles do not swell, or otherwise increase in volume, when exposed to an aqueous liquid (p. 15, lines 23-25; p. 26, lines 32-35).

The Examiner has indicated that Claims 50-56 and 87-93, which require the flowable absorbent material to include polymethylene urea, recite allowable subject matter. However, the invention is not limited to the use of polymethylene urea. Other absorbent materials which remain able to flow after contact with a liquid (i.e., which do not swell) are also within the scope of the invention.

In summary, Kellenberger does not teach or suggest the use of a flowable absorbent material as required by Applicants' claims, which remains able to flow after contact with a liquid. Accordingly, the 35 U.S.C. §102(b) rejection of Claims 45-49, 47-59, 62, 68-69, 71, 73-75, 82-86, 94-96, 102-105 and 107-111 should be withdrawn.

In Paragraphs 15-18 of the Office Action, the Examiner rejected dependent Claims 60, 61, 76, 78 and 79 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 5,904,672 to LeMahieu et al. This rejection is respectfully traversed. Neither reference, alone or in combination with the other, suggests an absorbent article including a flowable absorbent material which remains able to flow after contact with a liquid. LeMahieu et al., for instance, discloses highly absorbent materials which are swellable, and does not suggest flowable absorbent materials (Col. 7, lines 17-28).

In Paragraphs 19-21 of the Office Action, the Examiner rejected dependent Claims 63 and 64 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 5,807,365 to Luceri. This rejection is respectfully traversed. Neither reference, alone or combined with the other, suggests an absorbent article including a flowable absorbent material which remains able to flow after contact with a liquid. Luceri, for instance, discloses cellulose pulp fibers, superabsorbent polymers

and peat moss, which typically swell when wet and do not flow (Col. 4, line 45 - Col. 5, line 30).

In Paragraphs 22 and 23 of the Office Action, the Examiner rejected dependent Claims 65, 66, 68, 70 and 72 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 5,977,014 to Plischke et al. This rejection is respectfully traversed. Neither reference, alone or combined with the other, suggests an absorbent article including a flowable absorbent material which remains able to flow after contact with a liquid. Plischke et al., for instance, discloses using a chemical crosslinking agent to bond hydrogel-forming particles to a substrate (Abstract). Such a structure would inherently prevent the particles from flowing.

In Paragraphs 24 and 25 of the Office Action, the Examiner rejected Claims 80 and 81 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 3,794,034 to Jones, Sr. This rejection is respectfully traversed. Neither reference, alone or combined with the other, suggests an absorbent article including a flowable absorbent material which remains able to flow after contact with a liquid. For instance, Jones, Sr. teaches wood pulp and tissue as absorbent materials (Col. 3, line 65 - Col. 4, line 11). These materials clamp together when wet, and do not flow.

In Paragraphs 26-29 of the Office Action, the Examiner rejected Claims 97-101 and 106 under 35 U.S.C. §103(a) as obvious over Kellenberger in view of U.S. Patent 4,988,344 to Reising et al. This rejection is respectfully traversed.

Serial No.: 09/402,059

Docket No.: KCC-13368.10

Neither reference, alone or combined with the other, suggests an absorbent article including a flowable absorbent material which remains able to flow after contact with a liquid. For instance, Reising et al. refers to absorbent particles as "absorbent gelling material" (Col. 9, line 66 - Col. 10, line 20). Gelling materials typically swell when wet, and do not flow.

Applicants believe that the claims, as now presented, are in condition for allowance. If the Examiner feels that any issues remain unresolved, then the undersigned requests a telephone call from the Examiner, and a telephone interview.

Respectfully submitted,



Maxwell J. Petersen
Regis. No. 32,772

Pauley Petersen Kinne & Fejer
2800 West Higgins Road
Suite 365
Hoffman Estates, Illinois 60195
TEL (847) 490-1400
FAX (847) 490-1403

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

50. (Amended) The absorbent article of Claim 45, wherein the flowable absorbent material comprises polymethylene [area] urea.

107. (Amended) The absorbent article of Claim [1] 45 comprising a diaper.

108. (Amended) The absorbent article of Claim [1] 45 comprising an incontinence pad.